

Release notes for ENDF/B Development n-052_Te_126
evaluation

ENDF
B-VII.dev

April 26, 2017

- checkr Warnings:

1. A previous error halted parsing of the current section
MAT=5243, MF= 1, MT=451 (1): Parsing stopped

```
ERROR(S) FOUND IN MAT=5243, MF= 1, MT=451
SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER 261 TO 313
```

- checkr Errors:

1. A variable is outside the allowed ENDF range
MAT=5243, MF= 1, MT=451 (0): Variable range

```
ERROR(S) FOUND IN MAT=5243, MF= 1, MT=451
MOD = 1 OUT OF RANGE 0 - 0 RECORD NUMBER 261
```

2. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 2, MT=151 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5243, MF= 2, MT=151
SECTION 2/151 NOT IN DIRECTORY RECORD NUMBER 315
```

3. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 1 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 1
SECTION 3/ 1 NOT IN DIRECTORY RECORD NUMBER 436
```

4. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 2 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 2
SECTION 3/ 2 NOT IN DIRECTORY RECORD NUMBER 463
```

5. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 4 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 4
SECTION 3/ 4 NOT IN DIRECTORY RECORD NUMBER 490
```

6. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 16 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 16
SECTION 3/ 16 NOT IN DIRECTORY RECORD NUMBER 506
```

7. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 17 (0): Directory (b)

ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 17
SECTION 3/ 17 NOT IN DIRECTORY RECORD NUMBER 516

8. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 22 (0): Directory (b)

ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 22
SECTION 3/ 22 NOT IN DIRECTORY RECORD NUMBER 523

9. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 28 (0): Directory (b)

ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 28
SECTION 3/ 28 NOT IN DIRECTORY RECORD NUMBER 537

10. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 51 (0): Directory (b)

ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 51
SECTION 3/ 51 NOT IN DIRECTORY RECORD NUMBER 548

11. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 52 (0): Directory (b)

ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 52
SECTION 3/ 52 NOT IN DIRECTORY RECORD NUMBER 564

12. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 53 (0): Directory (b)

ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 53
SECTION 3/ 53 NOT IN DIRECTORY RECORD NUMBER 578

13. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 54 (0): Directory (b)

ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 54
SECTION 3/ 54 NOT IN DIRECTORY RECORD NUMBER 592

14. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 55 (0): Directory (b)

ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 55
SECTION 3/ 55 NOT IN DIRECTORY RECORD NUMBER 605

15. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 56 (0): Directory (b)

- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 56 | RECORD NUMBER | 618 |
| SECTION 3/ 56 NOT IN DIRECTORY | | |
16. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 57 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 57 | RECORD NUMBER | 630 |
| SECTION 3/ 57 NOT IN DIRECTORY | | |
17. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 58 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 58 | RECORD NUMBER | 642 |
| SECTION 3/ 58 NOT IN DIRECTORY | | |
18. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 59 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 59 | RECORD NUMBER | 653 |
| SECTION 3/ 59 NOT IN DIRECTORY | | |
19. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 60 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 60 | RECORD NUMBER | 664 |
| SECTION 3/ 60 NOT IN DIRECTORY | | |
20. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 61 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 61 | RECORD NUMBER | 675 |
| SECTION 3/ 61 NOT IN DIRECTORY | | |
21. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 62 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 62 | RECORD NUMBER | 685 |
| SECTION 3/ 62 NOT IN DIRECTORY | | |
22. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 63 (0): Directory (b)
- | | | |
|---|---------------|-----|
| ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 63 | RECORD NUMBER | 695 |
| SECTION 3/ 63 NOT IN DIRECTORY | | |
23. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT= 91 (0): Directory (b)

- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5243, MF= 3, MT= 91 | | |
| | SECTION 3/ 91 NOT IN DIRECTORY | RECORD NUMBER | 705 |
24. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT=102 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5243, MF= 3, MT=102 | | |
| | SECTION 3/102 NOT IN DIRECTORY | RECORD NUMBER | 714 |
25. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT=103 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5243, MF= 3, MT=103 | | |
| | SECTION 3/103 NOT IN DIRECTORY | RECORD NUMBER | 736 |
26. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT=104 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5243, MF= 3, MT=104 | | |
| | SECTION 3/104 NOT IN DIRECTORY | RECORD NUMBER | 750 |
27. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT=105 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5243, MF= 3, MT=105 | | |
| | SECTION 3/105 NOT IN DIRECTORY | RECORD NUMBER | 762 |
28. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 3, MT=107 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5243, MF= 3, MT=107 | | |
| | SECTION 3/107 NOT IN DIRECTORY | RECORD NUMBER | 772 |
29. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 2 (0): Directory (b)
- | | | | |
|--|--|---------------|-----|
| | ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 2 | | |
| | SECTION 4/ 2 NOT IN DIRECTORY | RECORD NUMBER | 789 |
30. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 16 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 16 | | |
| | SECTION 4/ 16 NOT IN DIRECTORY | RECORD NUMBER | 973 |
31. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 17 (0): Directory (b)

- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 17 | | |
| | SECTION 4/ 17 NOT IN DIRECTORY | RECORD NUMBER | 984 |
32. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 22 (0): Directory (b)
- | | | | |
|--|---|---------------|-----|
| | ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 22 | | |
| | SECTION 4/ 22 NOT IN DIRECTORY | RECORD NUMBER | 995 |
33. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 28 (0): Directory (b)
- | | | | |
|--|---|---------------|------|
| | ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 28 | | |
| | SECTION 4/ 28 NOT IN DIRECTORY | RECORD NUMBER | 1006 |
34. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 51 (0): Directory (b)
- | | | | |
|--|---|---------------|------|
| | ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 51 | | |
| | SECTION 4/ 51 NOT IN DIRECTORY | RECORD NUMBER | 1017 |
35. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 52 (0): Directory (b)
- | | | | |
|--|---|---------------|------|
| | ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 52 | | |
| | SECTION 4/ 52 NOT IN DIRECTORY | RECORD NUMBER | 1045 |
36. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 53 (0): Directory (b)
- | | | | |
|--|---|---------------|------|
| | ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 53 | | |
| | SECTION 4/ 53 NOT IN DIRECTORY | RECORD NUMBER | 1069 |
37. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 54 (0): Directory (b)
- | | | | |
|--|---|---------------|------|
| | ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 54 | | |
| | SECTION 4/ 54 NOT IN DIRECTORY | RECORD NUMBER | 1093 |
38. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 55 (0): Directory (b)
- | | | | |
|--|---|---------------|------|
| | ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 55 | | |
| | SECTION 4/ 55 NOT IN DIRECTORY | RECORD NUMBER | 1117 |
39. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 56 (0): Directory (b)

- | | |
|---|--------------------|
| ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 56 | |
| SECTION 4/ 56 NOT IN DIRECTORY | RECORD NUMBER 1141 |
40. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 57 (0): Directory (b)
- | | |
|---|--------------------|
| ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 57 | |
| SECTION 4/ 57 NOT IN DIRECTORY | RECORD NUMBER 1165 |
41. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 58 (0): Directory (b)
- | | |
|---|--------------------|
| ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 58 | |
| SECTION 4/ 58 NOT IN DIRECTORY | RECORD NUMBER 1189 |
42. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 59 (0): Directory (b)
- | | |
|---|--------------------|
| ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 59 | |
| SECTION 4/ 59 NOT IN DIRECTORY | RECORD NUMBER 1212 |
43. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 60 (0): Directory (b)
- | | |
|---|--------------------|
| ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 60 | |
| SECTION 4/ 60 NOT IN DIRECTORY | RECORD NUMBER 1235 |
44. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 61 (0): Directory (b)
- | | |
|---|--------------------|
| ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 61 | |
| SECTION 4/ 61 NOT IN DIRECTORY | RECORD NUMBER 1259 |
45. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 62 (0): Directory (b)
- | | |
|---|--------------------|
| ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 62 | |
| SECTION 4/ 62 NOT IN DIRECTORY | RECORD NUMBER 1282 |
46. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 63 (0): Directory (b)
- | | |
|---|--------------------|
| ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 63 | |
| SECTION 4/ 63 NOT IN DIRECTORY | RECORD NUMBER 1306 |
47. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 4, MT= 91 (0): Directory (b)

ERROR(S) FOUND IN MAT=5243, MF= 4, MT= 91
SECTION 4/ 91 NOT IN DIRECTORY RECORD NUMBER 1329

48. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 5, MT= 16 (0): Directory (b)

ERROR(S) FOUND IN MAT=5243, MF= 5, MT= 16
SECTION 5/ 16 NOT IN DIRECTORY RECORD NUMBER 1354

49. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 5, MT= 17 (0): Directory (b)

ERROR(S) FOUND IN MAT=5243, MF= 5, MT= 17
SECTION 5/ 17 NOT IN DIRECTORY RECORD NUMBER 1413

50. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 5, MT= 22 (0): Directory (b)

ERROR(S) FOUND IN MAT=5243, MF= 5, MT= 22
SECTION 5/ 22 NOT IN DIRECTORY RECORD NUMBER 1440

51. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 5, MT= 28 (0): Directory (b)

ERROR(S) FOUND IN MAT=5243, MF= 5, MT= 28
SECTION 5/ 28 NOT IN DIRECTORY RECORD NUMBER 1642

52. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=5243, MF= 5, MT= 91 (0): Directory (b)

ERROR(S) FOUND IN MAT=5243, MF= 5, MT= 91
SECTION 5/ 91 NOT IN DIRECTORY RECORD NUMBER 1734

- **psyche** Warnings:

1. Level density in URR not in agreement with PSYCHE's expectations
FILE 2 / SECTION 151 / ENERGY = 1.36000E+04. STRENGTH FUNCTION IS 1.00000E-04 / ENERGY = 1.36000E+04. STRENGTH FUNCTION IS 1.00000E-04 / DENSITY 4.00080E+02 SHOULD BE 3.94513E+02 (0): URR dens. (a)

FILE 2
SECTION 151
ENERGY = 1.36000E+04. STRENGTH FUNCTION IS 1.00000E-04
ENERGY = 1.36000E+04. STRENGTH FUNCTION IS 1.00000E-04
DENSITY 4.00080E+02 SHOULD BE 3.94513E+02

- **groupie** Errors:

1. Very small elastic cross section found
0: Small elastic

 ENDF/B Input and Output Data Filenames
 ENDFB.IN
 ENDFB.OUT
 ... [97 more lines]

• fudge-4.0 Warnings:

1. Missing a channel with a particular angular momenta combination
resonances / resolved / MultiLevel BreitWigner (Error # 0): missingResonanceChannel

WARNING: Missing a channel with angular momenta combination L = 0, J = 1.5 and S = 1.5 for "capture"
 WARNING: Missing a channel with angular momenta combination L = 1, J = 0.5 and S = 1.5 for "capture"
 WARNING: Missing a channel with angular momenta combination L = 1, J = 1.5 and S = 1.5 for "capture"
 WARNING: Missing a channel with angular momenta combination L = 1, J = 2.5 and S = 1.5 for "capture"

2. Cross section does not match sum of linked reaction cross sections
crossSectionSum label 0: total (Error # 0): CS Sum.

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.46%

3. Cross section does not match sum of linked reaction cross sections
crossSectionSum label 1: (z,n) (Error # 0): CS Sum.

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.15%

• fudge-4.0 Errors:

1. Calculated and tabulated Q values disagree.
reaction label 15: n[multiplicity:'2'] + Te125 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -9810680.816848755 eV vs -9123090. eV!

2. Calculated and tabulated Q values disagree.
reaction label 16: n[multiplicity:'3'] + Te124 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -16379652.04504395 eV vs -1.56999e7 eV!

3. Calculated and tabulated Q values disagree.
reaction label 17: n + H1 + Sb125 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -9795034.818740845 eV vs -9107630. eV!

4. Calculated and tabulated Q values disagree.
reaction label 18: Te127 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 5590852.720825195 eV vs 6290390. eV!

5. Calculated and tabulated Q values disagree.
reaction label 19: n + He4 + Sn122 (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -3240530.456924438 eV vs -2.5419e6 eV!

6. Calculated and tabulated Q values disagree.
reaction label 20: H1 + Sb126_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -3580801.673980713 eV vs -2881530. eV!

7. Calculated and tabulated Q values disagree.
reaction label 21: H2 + Sb125_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -7570468.717803955 eV vs -6797510. eV!

8. Calculated and tabulated Q values disagree.
reaction label 22: H3 + Sb124_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -10019762.28463745 eV vs -9327050. eV!

9. Calculated and tabulated Q values disagree.
reaction label 23: He4 + Sn123_s (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 2705311.308074951 eV vs 3409210. eV!

- njoy2012 Warnings:

1. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
group...compute self-shielded group-averaged cross-sections (0): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 16
only mf4/mf5 provided

2. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
group...compute self-shielded group-averaged cross-sections (1): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 17
only mf4/mf5 provided

3. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
group...compute self-shielded group-averaged cross-sections (2): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 22
only mf4/mf5 provided

4. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
group...compute self-shielded group-averaged cross-sections (3): GROUPR/conver (0)

---message from conver---cannot do complete particle production for mt= 28
only mf4/mf5 provided

5. With the advent of the ENDF-6 format, it is possible to make evaluations that fully describe all the products of a nuclear reaction. Some carry-over evaluations from earlier ENDF/B versions also have this capability, but many do not. This message is intended to goad evaluators to improve things!
group...compute self-shielded group-averaged cross-sections (4): GROUPT/conver (0)

```
---message from conver---cannot do complete particle production for mt= 91
                           only mf4/mf5 provided
```